

REMARKS

Status of the Claims

Claims 1-21 are pending in this application.

Claims 1-21 are rejected.

Claims 8, 14, and 20 have been amended. Support for these amendments can be found throughout the specification, claims, and drawings, as originally filed.

Rejection of Claims 8, 14, and 20 Under 35 U.S.C. § 112

Claims 8, 14, and 20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards in the invention. The Examiner has stated that it is unclear if the "wing member" recited in line 3 of each claim is referring to the "flying buttress" or another structure in the valve.

Applicant has amended claims 8, 14, and 20 to recite said valve seat portion further comprising at least one wing member in proximity to said pole piece, wherein at least one tolerance of said valve seat portion is maintained such that the distance between said valve seat and the upper surfaces of said at least one wing member in proximity to said pole piece is maintained within a tolerance of ± 0.025 mm. Support for this amendment can be found in paragraph [0034] of the specification.

Applicant believes that no new matter has been added, and respectfully requests the removal of the rejection under 35 U.S.C. § 112.

Rejection of Claims 1-7, 9-13, 15-19, and 21 Under 35 U.S.C. § 103

Claims 1-7, 9-13, 15-19, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,336,470 to Zapf (hereafter Zapf '470) in view of U.S. Patent No. 3,856,260 to Giordana (hereafter Giordana '260). Applicant respectfully traverses the rejection and requests reconsideration on the basis that the proposed combination fails to teach or suggest all of the elements of the rejected claims and it would not have been obvious to one of ordinary skill in the art to combine the references as suggested by the Examiner.

To establish a *prima fascia* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the applied reference must teach or suggest all of the claim limitations. In order for the proposed references to be relied upon, a person having ordinary skill in the art at the time of the invention must have been motivated to modify the references based on the teachings of those references.

The Applicant maintains that the proposed combination fails to teach or suggest all of the claim limitations, namely "a fluid control body adapted fro being received in a fluid housing, said fluid control body including a central cavity"; "an inner bore forming said pressure supply passage" or "a valve contained in said valve receiving chamber" as recited in independent claims 1, 10 and 16 from which claims 2-7,9,11-13,15,17-19 and 21 depend.

Zapf '470 does not teach or suggest both a fluid control body received in a fluid housing with the fluid control body including a central cavity. The Office Action maintains that Zapf '470 teaches or suggests a fluid control body at 2 in the drawings. The Office Action is silent as to where Zapf '470 teaches or suggests a fluid housing. Also there is nothing in Zapf '470 that teaches or suggests the fluid control body being received in a fluid housing, with the fluid control body including a central cavity. See claims 1, 10 and 16 of the present application. Giordana '260 also does not teach or suggest such a structure. For this reason alone the proposed combination of Zapf '470 in view of Giordana '260 fails to teach or suggest all of the limitations of the rejected claims. Removal of the rejection is requested.

Applicant maintains that the proposed combination of Zapf '470 in view of Giordana '260 fails to teach or suggest the feed supply tube having "an inner bore forming said pressure supply passage" or "a valve contained in said valve receiving chamber" as recited in independent claims 1, 10 and 16 from which claims 2-7, 9, 11-13, 15, 17-19 and 21 depend. The Office Action assets that Zapf '470 teaches or suggests a feed supply tube at "64", a pressure supply passage "P" and a valve member "6". The rejected claims state that the feed supply tube has the pressure supply tube. The pressure supply tube of Zipf '470 as taught by the office action is not in the portion labeled 64. Furthermore, if the portion of Zipf '470 labeled 64 is the feed supply tube then it should not have the proposed valve member "6" within it because the valve as recited in the rejected claims is contained in the valve receiving chamber. See independent claims 1, 10 and 16 from which claims 2-7, 9, 11-13, 15, 17-19 and 21 depend. Giordna '260 fails to remedy the defects of Zipf '470 and save the case of

obviousness presented in the Office Action. Giordana '260 does not teach or suggest a feed supply tube having "an inner bore forming said pressure supply passage" or "a valve contained in said valve receiving chamber" as recited the rejected claims. Therefore Applicant maintains that the proposed combination will fail. For all of the foregoing reasons Applicant requests removal of the rejection of claims 1-7, 9-13, 15-19, and 21 and allowance thereof.

In further regard to the rejection of claims 1-7, 9-13, 15-19, and 21, the Examiner has stated it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the solenoid fluid control valve of Zapf '470 by using a plastic seat member as taught by Giordana '260 in order to improve the sealing at the valve seat and to reduce the weight of the total weight of the valve assembly.

Independent claims 1, 10, and 16, contain the element of a valve seat portion being made of a plastic material and press fit onto a valve seat receiving area to form a valve receiving chamber. Zapf '470 does not teach or suggest this element. Zapf '470 teaches or suggests a 3/2 directional seat valve 1 is a so called single ball valve and has a valve body 6 correlated with two valve seats 8,10. *Col. 3, Lines 52-54.* The valve seat 8 is provided at the first shaped part 54, and the valve seat 10 is provided at the second shaped part 56. The shaped parts 54,56 are deep drawn sheet metal parts, preferably sheet steel parts, which have a basket-shaped or cup-shaped configuration with a cup bottom 54b,56b and a cup side wall 54a,56a. *Col. 4, Line 64 - Col. 5, Line 5.* The shaped parts 54,56 of the valve seats 8,10 are located in the valve bore 4, but do not form a valve seat portion being made of a plastic material and press fit onto a valve seat receiving area to form a valve receiving chamber in the same manner as the

present invention. Therefore, Giordana '260 must make up for the deficiencies of Zapf '470, or the rejection will fall.

Giordana '260 does not make up for the deficiencies of Zapf '470. Giordana '260 teaches a coil compression spring 17 is disposed in the blind bore 18 of the valve member 15; the lower end of this spring 17 reacts against the ball 5 bearing on an abutment 19 of seat member 4 and also on a central seal 20 formed with an axial hole 21. A second passage 22 opening into the chamber of ball valve 5 above said abutment 19 is formed obliquely through the base of the seat member 4. *Col 2, Lines 47-54.* Additionally, Figures 3 and 4 show the valve member 13 inserted into a core piece 9 with the valve member 13 having a spring 17 applying a force against the ball valve 5. Figures 3 and 4 also show the ball valve 5 resting in a seat member 4 and a central seal 20. Giordana '260 does not mention a valve receiving chamber formed by a valve seat portion press fit onto a valve receiving area in the same manner as the present invention.

Contrary to the Examiner, it would not have been obvious to modify Zapf '470 in view of Giordana '260 to arrive at the present invention. Neither Zapf '470 or Giordana '260 teach or suggest a valve seat portion being made of a plastic material and press fit onto said valve seat receiving area to form a valve receiving chamber, as set forth in claims 1, 10, and 16 of the present invention. Zapf '470 and Giordana '260 cannot be combined because Zapf '470 and Giordana '260 together do not teach all the elements of the present invention. Zapf '470 teaches or suggests two valve seats 8, 10 which surround a valve body 6 to perform the functions of a solenoid valve. There is no mention of a valve seat portion being made of plastic material and press fit onto a valve

receipt receiving area to form a valve receiving chamber. The solenoid valve of Giordana '260 teaches or suggests a seat member 4 for supporting a ball valve 5. The ball valve 5 simply rests between the seat member 4, and a spring 17. There is no valve receiving chamber or a valve seat portion being made of a plastic material and press fit onto a valve seat receiving area to form a valve receiving chamber.

The Examiner has also rejected claims 8, 14, and 20 as far as they are definite, under 35 U.S.C. § 103(a) as being unpatentable over Zapf '470 in view of Giordana '260.

However, Applicant notes that claim 8 is dependent upon claim 1, claim 14 is dependent upon claim 10, and claim 16 is dependent upon claim 20. Applicant has already shown that it would not have been obvious to modify Zapf '470 in view of Giordana '260, and that claims 1, 10, and 16 are believed to be allowable.

Therefore, Applicant submits that Zapf '470 in view of Giordana '260 does not teach or suggest the inventive combinations of the elements of claims 1, 10, and 16 because Zapf '470 in view of Giordana '260 does not teach or suggest a valve seat portion being made of a plastic material and press fit onto a valve seat receiving area to form a valve receiving chamber.

For at least these reasons, claims 1, 10, and 16, are allowable over the applied art, taken singly or in combination. Claims 2-9, which dependent from claim 1, claims 11-15, which depend from claim 10, and claims 17-21, which depend from claim 16, are likewise allowable over the applied art, taken singly or in combination since they include all of the subject matter of the base claims, which are believed to be in condition for allowance. Withdrawal of the rejection is respectfully requested.

CONCLUSION

It is respectfully submitted that in view of the above amendments and remarks the claims 1-21, as presented, are patentably distinguishable because the cited patents, whether taken alone or in combination, do not teach, suggest or render obvious, the present invention. Therefore, Applicant submits that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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